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1. Apache Atlas 编译

1.1. 安装 maven

请网上搜索一篇教程搞定！

1.2. 下载

<https://www.apache.org/dyn/closer.cgi/atlas/2.1.0/apache-atlas-2.1.0-sources.tar.gz>

1.3. 解压缩安装

```
tar -zxvf apache-atlas-2.1.0-sources.tar.gz -C apps/
```

1.4. 修改编译配置

按照自己的需求修改父工程的 pom 信息：

```
vim pom.xml
```

主要修改的是 hbase 和 solr：

```
<hadoop.version>2.8.3</hadoop.version>
<hbase.version>2.2.5</hbase.version>
<solr.version>7.7.3</solr.version>
<hive.version>3.1.0</hive.version>
<kafka.version>2.0.0</kafka.version>
<storm.version>1.2.0</storm.version>
<zookeeper.version>3.4.14</zookeeper.version>

<kafka.scala.binary.version>2.11</kafka.scala.binary.version>
<calcite.version>1.16.0</calcite.version>
<falcon.version>0.8</falcon.version>
<sqoop.version>1.4.6.2.3.99.0-195</sqoop.version>
<curator.version>4.0.1</curator.version>
<elasticsearch.version>5.6.4</elasticsearch.version>
```

原来：

```
<hadoop.version>3.1.1</hadoop.version>
<hbase.version>2.0.2</hbase.version>
<solr.version>7.5.0</solr.version>
<hive.version>3.1.0</hive.version>
<kafka.version>2.0.0</kafka.version>
<storm.version>1.2.0</storm.version>
<zookeeper.version>3.4.6</zookeeper.version>

<kafka.scala.binary.version>2.11</kafka.scala.binary.version>
<calcite.version>1.16.0</calcite.version>
<falcon.version>0.8</falcon.version>
<sqoop.version>1.4.6.2.3.99.0-195</sqoop.version>
```

```
<curator.version>4.0.1</curator.version>
<elasticsearch.version>5.6.4</elasticsearch.version>
```

修改 distro 项目的 pom 信息：

```
<hbase.tar>http://mirrors.tuna.tsinghua.edu.cn/apache/hbase/${hbase.version}/hbase-${hbase.version}-
bin.tar.gz</hbase.tar>

<solr.tar>http://mirrors.tuna.tsinghua.edu.cn/apache/lucene/solr/${solr.version}/solr-${solr.version}.tgz</solr.tar>
```

1.5. 编译

调高 maven 使用内存：

```
export MAVEN_OPTS="-Xms2g -Xmx2g"
```

先去下载所有的 jar：

```
mvn dependency:tree
```

编译命令：

```
mvn clean package -DskipTests -Pdist -Denforcer.skip=true -Dmaven.test.skip=true
```

如果需要使用自带的 hbase solr 的话，则这样编译：

```
mvn clean -DskipTests package -Pdist,embedded-hbase-solr -Denforcer.skip=true -Dmaven.test.skip=true
```

如果在哪个项目处中断，则在中断处继续编译：-rf :hive-bridge-shim，看报错提示可知。

```
mvn clean -DskipTests package -Pdist,embedded-hbase-solr -Denforcer.skip=true -Dmaven.test.skip=true -rf :hive-bridge-
shim
```

1.6. 编译结果

```
[INFO] -----
[INFO] Reactor Summary:
[INFO]
[INFO] Apache Atlas Server Build Tools 1.0 ..... SUCCESS [ 1.488 s]
[INFO] apache-atlas 2.1.0 ..... SUCCESS [ 7.162 s]
[INFO] Apache Atlas Test Utility Tools ..... SUCCESS [ 7.751 s]
[INFO] Apache Atlas Integration ..... SUCCESS [ 6.104 s]
[INFO] Apache Atlas Common ..... SUCCESS [ 1.504 s]
[INFO] Apache Atlas Client ..... SUCCESS [ 0.179 s]
[INFO] atlas-client-common ..... SUCCESS [ 1.079 s]
[INFO] atlas-client-v1 ..... SUCCESS [ 0.904 s]
[INFO] Apache Atlas Server API ..... SUCCESS [ 1.231 s]
[INFO] Apache Atlas Notification ..... SUCCESS [ 3.581 s]
[INFO] atlas-client-v2 ..... SUCCESS [ 0.936 s]
[INFO] Apache Atlas Graph Database Projects ..... SUCCESS [ 0.130 s]
[INFO] Apache Atlas Graph Database API ..... SUCCESS [ 1.429 s]
[INFO] Graph Database Common Code ..... SUCCESS [ 0.965 s]
[INFO] Apache Atlas JanusGraph-HBase2 Module ..... SUCCESS [01:02 min]
[INFO] Apache Atlas JanusGraph DB Impl ..... SUCCESS [ 7.583 s]
[INFO] Apache Atlas Graph DB Dependencies ..... SUCCESS [ 2.467 s]
[INFO] Apache Atlas Authorization ..... SUCCESS [ 1.417 s]
[INFO] Apache Atlas Repository ..... SUCCESS [ 14.241 s]
[INFO] Apache Atlas UI ..... SUCCESS [ 29.361 s]
[INFO] Apache Atlas New UI ..... SUCCESS [ 29.298 s]
[INFO] Apache Atlas Web Application ..... SUCCESS [ 56.681 s]
[INFO] Apache Atlas Documentation ..... SUCCESS [ 1.291 s]
[INFO] Apache Atlas FileSystem Model ..... SUCCESS [ 2.924 s]
[INFO] Apache Atlas Plugin Classloader ..... SUCCESS [ 0.701 s]
[INFO] Apache Atlas Hive Bridge Shim ..... SUCCESS [ 4.372 s]
[INFO] Apache Atlas Hive Bridge ..... SUCCESS [ 6.837 s]
[INFO] Apache Atlas Falcon Bridge Shim ..... SUCCESS [ 1.536 s]
[INFO] Apache Atlas Falcon Bridge ..... SUCCESS [ 1.048 s]
[INFO] Apache Atlas Sqoop Bridge Shim ..... SUCCESS [ 0.197 s]
[INFO] Apache Atlas Sqoop Bridge ..... SUCCESS [ 4.977 s]
[INFO] Apache Atlas Storm Bridge Shim ..... SUCCESS [ 0.598 s]
[INFO] Apache Atlas Storm Bridge ..... SUCCESS [ 1.776 s]
[INFO] Apache Atlas Hbase Bridge Shim ..... SUCCESS [ 1.471 s]
[INFO] Apache Atlas Hbase Bridge ..... SUCCESS [ 5.974 s]
[INFO] Apache HBase - Testing Util ..... SUCCESS [ 2.968 s]
```

```
[INFO] Apache Atlas Kafka Bridge ..... SUCCESS [ 1.512 s]
[INFO] Apache Atlas classification updater ..... SUCCESS [ 0.518 s]
[INFO] Apache Atlas Impala Hook API ..... SUCCESS [ 0.203 s]
[INFO] Apache Atlas Impala Bridge Shim ..... SUCCESS [ 0.217 s]
[INFO] Apache Atlas Impala Bridge ..... SUCCESS [ 2.930 s]
[INFO] Apache Atlas Distribution 2.1.0 ..... SUCCESS [01:35 min]
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 06:17 min
[INFO] Finished at: 2020-08-29T14:08:43+08:00
[INFO] -----
```

1.7. 获取安装包

编译完成之后，会产生打包结果，所在位置是：源码目录中的新出现的 distro/target 目录

```
cd /root/apps/apache-atlas-sources-2.1.0
cd distro/target
ll
```

```
drwxr-xr-x 3 root root      32 Aug 29 10:52 apache-atlas-2.1.0-bin
-rw-r--r-- 1 root root 309504105 Aug 29 10:52 apache-atlas-2.1.0-bin.tar.gz
drwxr-xr-x 3 root root      42 Aug 29 10:52 apache-atlas-2.1.0-classification-updater
-rw-r--r-- 1 root root    28719 Aug 29 10:52 apache-atlas-2.1.0-classification-updater.zip
drwxr-xr-x 3 root root      44 Aug 29 10:51 apache-atlas-2.1.0-falcon-hook
-rw-r--r-- 1 root root 10036248 Aug 29 10:51 apache-atlas-2.1.0-falcon-hook.tar.gz
drwxr-xr-x 3 root root      43 Aug 29 10:51 apache-atlas-2.1.0-hbase-hook
-rw-r--r-- 1 root root 11942580 Aug 29 10:51 apache-atlas-2.1.0-hbase-hook.tar.gz
drwxr-xr-x 3 root root      42 Aug 29 10:51 apache-atlas-2.1.0-hive-hook
-rw-r--r-- 1 root root 12029921 Aug 29 10:51 apache-atlas-2.1.0-hive-hook.tar.gz
drwxr-xr-x 3 root root      44 Aug 29 10:51 apache-atlas-2.1.0-impala-hook
-rw-r--r-- 1 root root 11992745 Aug 29 10:51 apache-atlas-2.1.0-impala-hook.tar.gz
drwxr-xr-x 3 root root      43 Aug 29 10:52 apache-atlas-2.1.0-kafka-hook
-rw-r--r-- 1 root root 10042576 Aug 29 10:52 apache-atlas-2.1.0-kafka-hook.tar.gz
drwxr-xr-x 3 root root      32 Aug 29 10:52 apache-atlas-2.1.0-server
-rw-r--r-- 1 root root 207525224 Aug 29 10:52 apache-atlas-2.1.0-server.tar.gz
-rw-r--r-- 1 root root 14192351 Aug 29 10:52 apache-atlas-2.1.0-sources.tar.gz
drwxr-xr-x 3 root root      43 Aug 29 10:51 apache-atlas-2.1.0-sqoop-hook
-rw-r--r-- 1 root root 10021840 Aug 29 10:51 apache-atlas-2.1.0-sqoop-hook.tar.gz
drwxr-xr-x 3 root root      43 Aug 29 10:52 apache-atlas-2.1.0-storm-hook
-rw-r--r-- 1 root root 57977649 Aug 29 10:52 apache-atlas-2.1.0-storm-hook.tar.gz
drwxr-xr-x 2 root root       6 Aug 29 10:51 archive-tmp
-rw-r--r-- 1 root root   98129 Aug 29 10:51 atlas-distro-2.1.0.jar
drwxr-xr-x 2 root root     290 Aug 29 10:51 bin
drwxr-xr-x 5 root root     231 Aug 29 10:51 conf
drwxr-xr-x 2 root root     28 Aug 29 10:51 maven-archiver
drwxr-xr-x 3 root root     22 Aug 29 10:51 maven-shared-archive-resources
drwxr-xr-x 2 root root     55 Aug 29 10:51 META-INF
-rw-r--r-- 1 root root    3799 Aug 29 10:51 rat.txt
drwxr-xr-x 3 root root     22 Aug 29 10:51 test-classes
```

2. 编译异常

2.1. 异常01

异常信息：

```
[ERROR] Failed to execute goal org.apache.maven.plugins:maven-enforcer-plugin:3.0.0-M1:enforce (enforce-versions) on
project apache-atlas: Some Enforcer rules have failed. Look above for specific messages explaining why the rule failed.
-> [Help 1]
```

解决方案：

```
mvn clean package -DskipTests -Pdist -Denforcer.skip=true
```

maven-enforcer-plugin 是一个规范约束maven构建环境的插件，例如 Maven 版本，JDK 版本和 OS 系列以及更多内置规则和用户创建的规则，旨在统一项目的开发环境。

2.2. 异常02

异常信息:

```
[ERROR] Failed to execute goal org.apache.maven.plugins:maven-compiler-plugin:3.7.0:testCompile (default-testCompile) on project atlas-intg: Compilation failure: Compilation failure:
```

解决方案:

```
mvn clean package -DskipTests -Pdist -Denforcer.skip=true -Dmaven.test.skip=true
```

2.3. 异常03

异常信息:

```
[ERROR] Failed to execute goal org.apache.maven.plugins:maven-compiler-plugin:3.7.0:compile (default-compile) on project atlas-common: Compilation failure: Compilation failure:
[ERROR] /root/apps/atlas-2.1.0-src/common/src/main/java/org/apache/atlas/utils/AtlasPathExtractorUtil.java:[26,32]
package org.apache.commons.lang3 does not exist
```

这个异常的原因，是 distro 项目中的 pom 文件没有引入 commons-lang3 依赖

```
cd $ATLAS_HOME
vim distro/pom.xml
```

```
<dependency>
  <groupId>org.apache.commons</groupId>
  <artifactId>commons-lang3</artifactId>
  <version>3.4</version>
</dependency>

<dependency>
  <groupId>commons-lang</groupId>
  <artifactId>commons-lang</artifactId>
  <version>2.6</version>
</dependency>
```

除了 distro 项目有这个问题外，common 子项目也有这个问题

```
cd $ATLAS_HOME
vim common/pom.xml
```